

Siemens expands data center partner ecosystem to scale next-generation AI infrastructure

- **Strategic investment in Emerald AI bridges gap between AI compute demand and grid constraints through IT/OT convergence**
- **Fluence Energy Inc. (Fluence) energy storage solutions are designed to accelerate grid connection and enable faster data center deployment**
- **PhysicsX collaboration introduces AI-accelerated modeling for data center power infrastructure, enabling faster design iteration and predictive thermal management**
- **Expanded ecosystem brings compute and power flexibility together to accelerate grid interconnection and time to revenue for AI infrastructure operators**

As AI drives unprecedented demand for data center capacity, the industry faces a growing challenge in aligning rapidly expanding compute infrastructure with available power. To address this, Siemens Smart Infrastructure is expanding its data center ecosystem through a strategic investment in, and partnership with, Emerald AI, alongside the integration of Fluence battery energy storage solutions, and the addition of collaborative physics-based AI modeling with PhysicsX. Together, these capabilities create flexibility across compute, energy, and infrastructure systems, helping data center operators connect to the grid faster, scale efficiently, and operate reliably in a power-constrained world.

“Scaling AI infrastructure isn’t just a computing challenge, it is equally an energy and infrastructure challenge,” said Ruth Gratzke, President of Siemens Smart Infrastructure U.S. “As demand for AI processing accelerates, data center growth is increasingly constrained by grid capacity and interconnection timelines. Addressing this requires complex coordination across both the digital and energy domains. Siemens is actively investing in key technologies and partnerships to expand the ecosystem required to scale AI responsibly and support the next generation of data center infrastructure.”

Emerald AI enables AI workloads to shift in time and location to align with grid conditions, allowing data center demand to respond dynamically to available power. By coordinating when and where AI workloads run alongside dispatching onsite energy resources, this approach helps smooth peak demand, achieves faster and larger grid connections for data centers, and reduces pressure on constrained power infrastructure. The strategic investment in Emerald AI strengthens Siemens' ability to introduce flexibility at the compute layer. When combined with Siemens' expertise in power infrastructure and operational technology, this creates true IT/OT convergence between AI workloads and power systems.

A key element of this expanded ecosystem is the addition of Fluence's grid-scale energy storage solutions, designed to support the next generation of high-performance AI data centers. As compute clusters grow in size and density, Fluence energy storage solutions enable data centers to accelerate grid connection by shaping load and coordinating ramp rates, making large AI-scale demand more predictable and easier for utilities to approve. This can turn power-constrained locations into viable data center sites and accelerate time to power, which can enable deployment of energy storage in months rather than years of grid upgrades. Fluence's energy storage solutions can also provide dispatchable, on-site power that aims to enable data centers to operate during grid build-outs, capacity shortfalls, or outages. By supporting consistent power quality and flexible scaling, Fluence can help data center operators bring capacity online faster while maintaining the reliability required for mission-critical AI workloads.

Strengthening this ecosystem further, Siemens is collaborating with PhysicsX to apply physics AI to the design and operation of data center power distribution systems. Using AI models trained on Siemens' multi-physics simulation data, engineers can predict thermal behavior in complex busway systems in real time. With PhysicsX, simulations that once took days can run in under a second, enabling faster design iteration, optimized infrastructure for dynamic AI workloads, and the foundation for predictive monitoring across entire facilities.

The rapid growth of AI will continue to place new and often highly dynamic demands on power systems, with large training and inference clusters creating rapidly shifting loads that challenge traditional grid planning and data center design. As a result, operators must find new ways to manage these demands while maintaining the performance and reliability required for AI infrastructure. Siemens' expanded ecosystem is designed to help address this challenge by bringing together AI workload orchestration, grid-integrated energy systems, and AI-optimized physical infrastructure to support the next generation of AI infrastructure.

This press release as well as a press picture is available [here](#).

For more information on Siemens Smart Infrastructure, please see [Siemens Smart Infrastructure](#).

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Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings, and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions, and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. To protect this journey, we foster holistic cybersecurity to ensure secure and reliable operations. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland. As of September 30, 2025, the business had around 79,400 employees worldwide.

Siemens AG (Berlin and Munich) is a leading technology company focused on industry, infrastructure, mobility, and healthcare. The company's purpose is to create technology to transform the everyday, for everyone. By combining the real and the digital worlds, Siemens empowers customers to accelerate their digital and sustainability transformations, making factories more efficient, cities more livable, and transportation more sustainable. A leader in industrial AI, Siemens leverages its deep domain know-how to apply AI – including generative AI – to real-world applications, making AI accessible and impactful for customers across diverse industries. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a leading global medical technology provider pioneering breakthroughs in healthcare. For everyone. Everywhere. Sustainably. In fiscal 2025, which ended on September 30, 2025, the Siemens Group generated revenue of €78.9 billion and net income of €10.4 billion. As of September 30, 2025, the company employed around 318,000 people worldwide on the basis of continuing operations. Further information is available on the Internet at www.siemens.com.

About Emerald AI

Emerald AI is the pioneer in AI-driven data center flexibility management, transforming energy-intensive data centers into intelligent grid assets. Its AI-powered Conductor platform enables data centers to dynamically adjust power consumption by orchestrating onsite energy resources alongside AI workloads, such as training, fine-tuning, and inference, across networks of data centers in real-time. For more information, visit www.emeraldai.co

About Fluence

Fluence Energy, Inc. (Nasdaq: FLNC) is a global market leader delivering intelligent energy storage and optimization software for renewables and storage. The Company's solutions and operational services are helping to create a more resilient grid and unlock the full potential of renewable portfolios. With gigawatts of projects successfully contracted, deployed, and under management across nearly 50 markets, the Company is transforming the way we power our world for a more sustainable future.

About PhysicsX

PhysicsX is an AI-native engineering company on a mission to accelerate innovation and overhaul what engineering and manufacturing look like today. The company is building a new software stack to deliver deep physics AI enablement across the entire engineering lifecycle. PhysicsX partners with leading organizations in aerospace & defense, automotive, semiconductors, materials, and energy & renewables, supporting them on some of their most critical and complex challenges. PhysicsX is headquartered in the United Kingdom, with offices in London and New York. For press inquiries, contact press@physicsx.ai.